

solubility aids, and mixtures thereof, and wherein the cogranulated detergency additive composition comprises at least about 5% by weight of the tablet.

25. (New) A multi-phase detergent tablet according to claim 24 wherein the cogranulated detergency additive composition comprises i) from about 1% to about 25% by weight thereof of the polymeric polycarboxylate, ii) from about 70% to about 99% by weight thereof of the inorganic carrier, and iii) from about 0.5% to about 20% by weight thereof of said one or more organic auxiliaries, and wherein the cogranulated detergency additive composition comprises from about 10% to about 80% by weight of the tablet.

26. (New) A multi-phase detergent tablet according to claim 25 wherein the cogranulated detergency additive composition comprises i) from about 5% to about 20% by weight thereof of the polymeric polycarboxylate, and ii) from about 80% to about 95% by weight thereof of the inorganic carrier, said inorganic carrier comprising one or more inorganic salts, and wherein the cogranulated detergency additive composition comprises from about 20% to about 60% by weight of the tablet.

27. (New) A multi-phase detergent tablet according to claim 24 wherein the polymeric polycarboxylate is selected from i) homo- and copolymers of one or more carboxylic monomers selected from acrylic acid, methacrylic acid, alpha-chloroacrylic acid, alpha-hydroxyacrylic acid, maleic acid, itaconic acid, and mixtures thereof, and ii) copolymers of one or more of the above carboxylic monomers with one or more nonionic monomers selected from acrylamide, acrylonitrile, vinyl esters, methylvinyl ketone, acrolein, styrene and alpha-methyl styrene, alkyl vinyl ethers, esters and amides of carboxylic monomers, water-soluble salts, and mixtures thereof.

28. (New) A multi-phase detergent tablet according to claim 24 wherein the inorganic carrier is selected from alkali metal silicate, alkali metal carbonate, alkali metal bicarbonate, alkali metal sesquicarbonate, alkali metal sulfate, alkali metal tripolyphosphate, and mixtures thereof, and wherein the inorganic carrier is in the form of a powder or mixture of powders having a weight-average particle size of less than about 200 $\mu$ m.

29. (New) A multi-phase detergent tablet according to claim 28 wherein the inorganic carrier is in the form of a powder or mixture of powders having a weight-average particle size of less than about 150 $\mu$ m.

30. (New) A multi-phase detergent tablet according to claim 1 wherein the cogranulated detergency additive composition comprises i) from about 1% to about 25% by weight thereof

of the polymeric polycarboxylate, ii) from about 30% to about 85% by weight thereof of alkali metal carbonate, alkali metal bicarbonate, alkali metal sesquicarbonate, and mixtures thereof, iii) from about 13% to about 69% by weight thereof of alkali metal sulfate, and iv) from 0% to about 5% by weight thereof of an organic chelating agent.

31. (New) A multi-phase detergent tablet according to claim 30 wherein the cogranulated detergency additive composition comprises i) from about 5% to about 20% by weight thereof of the polymeric polycarboxylate, ii) from about 45% to about 65% by weight thereof of alkali metal carbonate alkali metal bicarbonate, alkali metal sesquicarbonate, and mixtures thereof, and iii) from about 15% to about 50% by weight thereof of alkali metal sulfate.

32. (New) A multi-phase detergent tablet according to claim 24 wherein the organic chelating agent is selected from diethylenetriamine penta (methylene phosphonate), ethylenediamine tetra(methylene phosphonate) hexamethylenediamine tetra(methylene phosphonate), ethylene diphosphonate, hydroxy-ethylene-1,1-diphosphonate, nitrilotriacetate, ethylenediaminetetracetate, ethylenediamine-N,N'-disuccinate, methylglycinediacetic acid in their salt and free acid forms, and mixtures thereof.

33. (New) A multi-phase detergent tablet according to claim 24 wherein the polymeric disintegrant is selected from starch, cellulose and derivatives thereof, alginates, sugars, polyvinylpyrrolidones, swellable clays, and mixtures thereof.

34. (New) A multi-phase detergent tablet according to claim 24 wherein the solubility aid is a water-soluble hydrated salt having a solubility in distilled water of at least about 25g/100g at 25°C.

35. (New) A multi-phase detergent tablet according to claim 34 wherein the solubility aid is selected from hydrates of sodium acetate, sodium potassium tartrate, sodium citrate, and mixtures thereof.

36. (New) A multi-phase detergent tablet according to claim 1 wherein said one or more second phases is in the form of a compressed particulate solid and the first phase is formed by compression at a pressure greater than that of the second phase.

37. (New) A multi-phase detergent tablet according to claim 36 wherein the first phase is compressed at a pressure of at least about 40 kg/cm<sup>2</sup>.

38. (New) A multi-phase detergent tablet according to claim 37 wherein the first phase is compressed at a pressure of at least about 350 kg/cm<sup>2</sup> and wherein the second phase is compressed at a pressure of less than about 350 kg/cm<sup>2</sup>.

39. (New) A multi-phase detergent tablet according to claim 38 wherein a) the first phase is in the form of a shaped body having at least one mould therein; and b) the second phase is in the form of a particulate solid compressed within said mould.

40. (New) A method of making the multi-phase detergent tablet of claim 1 comprising admixing a liquid feed comprising the polymeric polycarboxylate with a powder feed comprising the inorganic carrier and subjecting the mixture to conditions of agitation and heat to form coganules of the detergency additive composition.

41. (New) A method according to claim 40 wherein the liquid feed and powder feed are admixed under essentially non-evaporative conditions to form a wet coganular output stream and wherein the wet coganular output stream is subsequently subjected to heat-drying.

42. (New) A method according to claim 41 wherein the liquid feed comprises the polymeric polycarboxylate in the form of a solution, dispersion, slurry, or emulsion in a liquid or liquifiable medium, wherein the powder feed comprises the inorganic carrier in the form of a powder or mixture of powders having a weight-average particle size of less than about 200µm, and wherein the liquid:powder feed ratio is less than about 0.5.

43. (New) A method according to claim 42 wherein the powder feed comprises the inorganic carrier in the form of a powder or mixture of powders having a weight-average particle size of less than about 150µm, and wherein the liquid:powder feed ratio is from about 0.1 to about 0.35.

44. (New) A method according to claim 43 wherein the powder feed comprises a mixture of alkali metal carbonate and alkali metal sulfate in a weight ratio of from about 3:1 to about 1:3.

45. (New) A method according to claim 40 wherein the coganular detergency additive composition has an apparent density in the range from about 400 to about 1100 g/l, a median granule size of from about 400 to about 700 µm, and a size distribution such that no more than about 5% by weight is greater than 1500µm and at least about 95% by weight is greater than 200µm.

46. (New) A method according to claim 45 wherein the cogranular detergency additive composition has an apparent density in the range from about 600 to about 900 g/l and a median granule size of from about 450 to about 650  $\mu\text{m}$ .

47. (New) A method according to claim 40 comprising the steps of compacting the cogranules, optionally with other detergent tablet ingredients, to form the first phase of the tablet, superposing the second phase in particulate or tablet form on or over the first phase and thereafter further compacting the first phase and superposed second phase to form the final multi-phase detergent tablet.

48. (New) A method of making a cogranular detergency additive composition comprising admixing a liquid feed comprising a polymeric polycarboxylate with a powder feed comprising inorganic carrier and subjecting the mixture to conditions of agitation and heat, and wherein the polymeric polycarboxylate is in the form of a solution, dispersion, slurry, or emulsion in a liquid or liquifiable medium, the inorganic carrier is in the form of a powder or mixture of powders having a weight-average particle size of less than about 200 $\mu\text{m}$ , and wherein the liquid:powder feed ratio is less than about 0.5.

49. (New) A method according to claim 48 wherein the inorganic carrier is in the form of a powder or mixture of powders having a weight-average particle size of less than about 150 $\mu\text{m}$ , and wherein the liquid:powder feed ratio is from about 0.1 to about 0.35.

50. (New) A cogranulated detergency additive composition comprising i) from about 0.1% to about 60% by weight of polymeric polycarboxylate, ii) from about 40% to about 99.9% by weight of inorganic carrier in the form of a powder or mixture of powders having a weight-average particle size of less than about 200 $\mu\text{m}$ , and iii) from 0% to about 50% by weight of one or more organic auxiliaries selected from chelating agents, surfactants, polymeric disintegrants, solubility aids, and mixtures thereof.

51. (New) A cogranulated detergency additive composition according to claim 50 comprising i) from about 1% to about 25% by weight of the polymeric polycarboxylate, ii) from about 70% to about 99% by weight of the inorganic carrier in the form of a powder or mixture of powders having a weight-average particle size of less than about 150 $\mu\text{m}$ , and iii) from 0.5% to about 20% by weight of said one or more organic auxiliaries.

52. (New) A cogranulated detergency additive composition according to claim 51 comprising i) from about 5 to about 20% by weight of the polymeric polycarboxylate, and ii) from about 80% to about 95% by weight of the inorganic carrier.

a1  
53. (New) A cogranulated detergency additive composition according to claim 50 comprising from about 5% to about 20% by weight of the polymeric polycarboxylate and from about 80% to about 95% by weight of the inorganic carrier, and wherein the inorganic carrier comprises i) from about 45% to about 65% by weight of the additive composition of alkali metal carbonate, alkali metal bicarbonate, alkali metal sesquicarbonate, and mixtures thereof, and ii) from about 15% to about 50% by weight of the additive composition of alkali metal sulfate.


#### STATUS OF THE CLAIMS

The support for these amendments is found in the claims as originally filed. Claims 2-23 have been canceled and new claims 24-53 have been added for to remove EPO-style language and to bring the claims into conformance with, *inter alia*, 37 CFR 1.75. No new matter is added. Claims 1 and 24-53 remain pending in this application.

Respectfully submitted,

For: **Steven Baldwin McGowan et al.**

By

  
Kevin L. Waugh  
Attorney/Agent for Applicants  
Registration No. 47,206  
Tele. No.: (513) 627-1644

9/04, 2001  
Cincinnati, Ohio  
(CM 2046F PrelimAmend.doc)